

HGST Delivers World's First 10TB Enterprise HDD for Active Archive Applications

Newest Ultrastar® Archive Ha10 Uniquely Leverages HelioSeal® and Shingled Magnetic Recording Technologies to Deliver a True Enterprise-Grade Solution

SAN JOSE, Calif., June 9, 2015 /PRNewswire/ -- Helping the world harness the power of data, HGST (@HGSTstorage), a Western Digital company (NASDAQ: WDC) today announced the first enterprise-class 10TB (terabyte) hard disk drive (HDD) for next-generation active archive applications. The host-managed Ultrastar Archive Ha¹⁰ SMR HDD sets a new standard in enabling the world's densest server and storage systems with unprecedented TCO levels. This industry-defining product is the result of combining two complementary technologies - HGST's second generation, field-proven HelioSeal platform and shingled magnetic recording (SMR) - to deliver unmatched storage density and power efficiency, without compromising reliability and performance predictability. With an industry-leading 10TB capacity, the Ultrastar Archive Ha¹⁰ gives customers a time-tomarket capacity advantage for archival environments and applications where data is seguentially written and randomly read. such as social media, cloud storage, online backup, life sciences as well as media and entertainment.



<u>Ultrastar Archive Ha¹⁰ Addresses Data Growth, New Market Segmentation</u>
HGST recognizes SMR as core technology necessary in driving areal density increases. By overlapping or "shingling" the data tracks on top of each other, higher areal density can be achieved within the same physical footprint. Based on feedback from customers whose data center environments demand predictable performance and control of how data is handled, HGST has implemented a host-managed SMR solution. The sequential write behavior of host-managed SMR complements active archive workloads.

Today, many hyperscale cloud providers are discovering that most of their active archive applications are already sequential, creating the ideal environment for SMR HDDs to thrive. The capacity enterprise HDD market is adapting to this shift, creating demand for purpose built drives, making the Ha¹⁰ an ideal solution due to its capacity, data integrity and desired predictable performance. Currently, HGST estimates that active archive/deep archive applications are generating 20-35 percent of the data being stored today. Based on current customer data, HGST is projecting that this statistic will grow to more than 50 percent in the next five years.

Extending Leadership

The Ultrastar Archive Ha¹⁰ is the third of HGST's helium-based HDDs launched in less than two years. It underscores the sustainability, applicability, and success of its HelioSeal technology with well over one million units deployed to date. HGST continues to address data growth and long-term data retention by investing in a multi-generational path of SMR-based HDDs with HelioSeal. The Ultrastar Archive Ha¹⁰ and its subsequent SMR-based successors will consistently deliver the highest capacity with the lowest TCO.

Based on the proven HelioSeal platform, the Ultrastar Archive Ha¹⁰ leads the market in reliability and data integrity for active archive applications. The drive is rated at two million hours mean time between failure (MTBF), offers a five-year limited warranty, a 10⁻¹⁵ unrecoverable reduced bit error rate, rotational vibration safeguards, and 600K load/unload cycles, making it the optimal enterprise-class solution for active archive workloads. Customers who are driven by the capacity, performance and low TCO are already capitalizing on value of the Ha¹⁰ HDD.

"We are in the era of data explosion, which has brought huge challenges to massive data management with increasing data storage costs and demand for instant access to all data," said Yuan Yuan, Vice President, IT Storage Product Line, Huawei. "Huawei is pleased to see the launch of HGST Ultrastar Archive Ha¹⁰ with 10TB single drive capacity and its application in Huawei's OceanStor storage system. Huawei will continue cooperating with its partners in innovative technology development and applications so as to help customers tackle various challenges posed by massive data management."

"As Europe's leading cloud service provider, our growth has been unprecedented. Our ability to scale efficiently, quickly, and smartly is premised on innovative products and technologies that are right-sized for a compute and storage-rich environment," said Miroslaw Klaba, vice president of research and development, OVH. "We have identified both HelioSeal and host-managed SMR as two cornerstone recording technologies that provide a transformational means to our datacenter deployment and service offerings. We continue to partner with HGST on solutions that put us on an accelerated path for PB-scale deployment at low TCO."

The New Era of Capacity Enterprise Storage

The Ultrastar Archive Ha¹⁰ underscores HGST's overall strategy to motivate the market with innovative solutions that enrich the partner ecosystem and better elevate software solutions in the storage stack.

"HGST's helium-filled drives boast industry-leading storage density, low power consumption and proven reliability with 2.5M hours MTBF. By layering SMR on top of helium, we are enabling massively-scalable, TCO-driven storage solutions with the performance and durability necessary for the long term retention of archived data," said Brendan Collins, vice president of product marketing, HGST. "Making SMR design investments today minimizes incremental efforts for future SMR solutions, and gives our customers a time-to-market advantage for all current and future high capacity HDDs in the market."

Initial rollout of the 10TB HDD is focused on cloud and OEM storage customers who have the in-house capability to develop the software required. To benefit from the value proposition of Ultrastar Archive Ha¹⁰, host applications need to be first sequentialized, which requires adjustments in the software stack to take advantage of the areal density gain, and consequently, the sequential write behavior of host-managed SMR. This not only ensures the predictable performance that enterprise and cloud customers have come to expect, but also provides maximum control and arbitration at the host system level, which customers prefer.

HGST's activities with the Open Source community will also help accelerate adoption for channel customers and white-box system builders, based on Linux and other select open source OS. HGST is providing an Open Source Software Development Kit (SDK) known as "libzbc" to facilitate Linux application development and implementation of new SMR command sets. Access to the SDK can be found at: https://github.com/hgst.

Since the HGST Ultrastar Archive Ha¹⁰ HDD is not a drop in replacement for today's enterprise-capacity HDD, please visit www.hgst.com/10TBnow to see if your application or solution qualifies for the HGST Ultrastar Archive Ha¹⁰ program.

For more information on the Ultrastar Archive Ha¹⁰ HDD, <u>www.hgst.com/ultrastararchive</u>.

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TWEET THIS: HGST (@HGSTStorage) delivers world's first #10TB HDD for #ActiveArchive market: http://bit.ly/1diiGWj #LongLiveData

About HGST

HGST, a Western Digital company (NASDAQ: WDC), develops innovative, advanced hard disk drives, enterprise-class solid state drives, external storage solutions and services used to store, preserve and manage the world's most valued data. HGST addresses customers' rapidly changing storage needs by delivering intelligent storage devices that tightly integrate hardware and software to maximize solution performance. Founded by the pioneers of hard drives, HGST provides high-value storage for a broad range of market segments, including Enterprise, Cloud, Data Center, Mobile Computing, Consumer Electronics and Personal Storage. HGST was established in 2003 and maintains its U.S. headquarters in San Jose, California. To find out more about HGST enterprise-class HDD, SSD and SW solutions, please visit www.hgst.com.

This press release contains forward-looking statements, including statements relating to expected demand for certain categories of HDDs and availability dates for HDD products. These forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements, including changes in markets, demand, global economic conditions and other risks and uncertainties listed in Western Digital's recent SEC filings, to which your attention is directed. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak on as of the date hereof, and HGST/WD undertakes no obligation to update these forward-looking statements to reflect subsequent events or circumstances.

One GB is equal to one billion bytes, and one TB equals 1,000 GB (one trillion bytes). Actual capacity will vary depending on operating environment and formatting.

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MTBF is a statistical representation of drive reliability under median operating conditions. MTBF ratings are not intended to predict an individual drive's reliability and does not constitute a warranty.

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To view the original version on PR Newswire, visit: http://www.prnewswire.com/news-releases/hgst-delivers-worlds-first-10tb-enterprise-hdd-for-active-archive-applications-300095957.html

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